CLAIMS

We claim:

1.   A management model for managing at least resources and tasks in a computerized enterprise system, comprising:

a user interface;

a common information model object manager (CIMOM) exposing COM interfaces, said CIMOM in communication with said user interface through one of said COM interfaces; and

at least one provider decoupled from said user interface and communicating with said CIMOM via another of said COM interfaces, said provider exposing a standard interface to allow management of the enterprise system resources and tasks at the provider level.

2.   The model of claim 1, wherein said at least one provider performs syntax and semantic checks on inputs received from an user via said user interface and passed via said CIMOM.

3.   The model of claim 2, wherein said user interface performs essentially no syntax and semantic checks of said inputs.

4.   The model of claim 1, wherein said standard interface exposed by said provider includes command methods for getting and setting attribute values.

5.   The model of claim 4, wherein said command methods for getting and setting attribute values are exposed for only particular attributes of said system resources and tasks based on privileges contained in a user profile.

6.   The model of claim 1, wherein said standard interface exposed by said provider includes a command method for getting help strings.

7.   The model of claim 6, wherein said command method for getting help strings are exposed based on an expertise level contained in a user profile.

8.   The model of claim 1, further comprising an active directory (AD) containing system resource information.

9.   The model of claim 8, wherein system resource information includes at least one user profile.

10.   The model of claim 1, wherein said standard interface exposed by said provider includes command methods for saving and restoring configuration data.

11.   The model of claim 1, wherein said provider dynamically localizes a language of said user interface.

12. The model of claim 11, wherein said user interface comprises a Web browser, and wherein said provider dynamically localizes a language of said user interface based on a sensed language preference of said Web browser.

13. The model of claim 11, wherein said provider dynamically localizes a language of said user interface based on settings in a user profile.

14. The model of claim 1, wherein said user interface comprises a command line interface (CLI).

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15. The model of claim 1, wherein said user interface comprises a Web browser.

16. A computer-readable medium having computer-executable components, comprising:

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a user interface component for providing information to and receiving data and commands from a user;

a common information model object manager (CIMOM) component for exposing COM interfaces, said CIMOM component communicating with said user interface through one of said COM interfaces; and

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at least one provider component for exposing a standard interface to allow management of an enterprise system resources and tasks at the provider level, said

provider component communicating with said CIMOM via another of said COM interfaces.

17.   The computer-readable medium of claim 16, wherein said at least one provider component performs syntax and semantic checks on inputs received from said user interface component via said CIMOM component.

18.   The computer-readable medium of claim 16, wherein said standard interface exposed by said provider component includes command methods for getting and setting attribute values.

19.   The computer-readable medium of claim 16, further comprising a database component for storing at least a user profile, and wherein said command methods for getting and setting attribute values are exposed for only particular attributes of said system resources and tasks based on privileges contained in said user profile.

20.   The computer-readable medium of claim 16, wherein said standard interface exposed by said provider includes a command method for getting help strings.

21.   The computer-readable medium of claim 20, further comprising a database component for storing at least a user profile, and wherein said command method for getting help strings are exposed based on an expertise level contained in said user profile.

22.   The computer-readable medium of claim 16, further comprising an active directory (AD) component for storing system resource information.

23.   The computer-readable medium of claim 16, wherein said standard

5   interface exposed by said provider component includes command methods for saving and restoring configuration data.

24.   The computer-readable medium of claim 16, wherein said provider component dynamically localizes a language of said user interface component.

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25.   The computer-readable medium of claim 24, wherein said user interface component comprises a Web browser component, and wherein said provider component dynamically localizes a language of said user interface based on a sensed language preference of said Web browser.

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26.   A computer-readable medium having a computer-executable management system provider component including computer-executable instructions for performing the steps of:

exposing a standard interface;

20   receiving information via the standard interface relating to management of at least one of an enterprise resource and task; and

performing syntax and semantic checks on the information.

27.   The computer-readable medium of claim 26, wherein said computer-executable management system provider component further includes computer-executable instructions for performing the steps of getting and setting an attribute value.

5   28.   The computer-readable medium of claim 27, wherein said computer-executable management system provider component further includes computer-executable instructions for performing the step of extracting user profile information from an external database, and wherein said steps of getting and setting an attribute value are exposed for particular attribute values based on the user profile.

10   29.   The computer-readable medium of claim 26, wherein said computer-executable management system provider component further includes computer-executable instructions for performing the step of getting help strings.

15   30.   The computer-readable medium of claim 29, wherein said computer-executable management system provider component further includes computer-executable instructions for performing the step of extracting user language preference information from an external component, and wherein said step of getting help strings includes the step of dynamically localizing the help strings based on the user language

20   preference information.

31.   The computer-readable medium of claim 29, wherein said computer-executable management system provider component further includes computer-

executable instructions for performing the step of extracting user profile information from an external database, and wherein said step of getting help strings is exposed based on the user profile.

5   32.   The computer-readable medium of claim 26, wherein said computer-executable management system provider component further includes computer-executable instructions for performing the steps of saving and restoring enterprise configuration data to and from an external memory component.

10   33.   A method of exposing an element of an enterprise system to be managed, comprising the steps of:

defining at least one user interface component to expose and allow access to the element on a user interface; and

implement at least one provider for the element, said provider providing a class

15   definition and generating instances of the class to which the element belongs, said provider further providing a standard interface to allow management of the element via the at least one user interface.

34.   The method of claim 33, wherein said step of implementing at least one

20   provider for the element includes the step of defining a schema for the element.

35.   The method of claim 34, wherein said step of defining a schema for the element comprises the steps of:

identifying management attributes of the element;

identifying management tasks associated with the element;

identifying a base class from common information model (CIM) schema classes; and

5   deriving a class for the element from the base class.

36.   The method of claim 33, wherein said user interface component is a Web user interface, and wherein the step of defining at least one user interface component to expose and allow access to the element on a user interface comprises the steps of:

10   defining Web elements that add links to the managed element in a Web UI framework; and

implementing ASP scripts that implement the at least one provider.

37.   The method of claim 36, wherein the step of implementing ASP scripts

15 comprises the step of localizing a language of the ASP scripts.

38.   The method of claim 33, wherein said step of providing a standard interface to allow management of the element via the at least one user interface comprises the step of implementing a method to set a value of an attribute of the element.

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39.   The method of claim 33, wherein said step of providing a standard interface to allow management of the element via the at least one user interface comprises the step of implementing a method to retrieve a value of an attribute of the element.

40.   The method of claim 33, wherein said step of providing a standard

interface to allow management of the element via the at least one user interface comprises

the step of implementing a method to retrieve a default value of an attribute of the

5   element.

41.   The method of claim 33, wherein said step of providing a standard

interface to allow management of the element via the at least one user interface comprises

the step of implementing a method to retrieve a list of valid values of an attribute of the

10   element.

42.   The method of claim 33, wherein said step of providing a standard

interface to allow management of the element via the at least one user interface comprises

the step of implementing a method to retrieve validation rules of an attribute of the

15   element.

43.   The method of claim 33, wherein said step of providing a standard

interface to allow management of the element via the at least one user interface comprises

the step of implementing a method to retrieve help information of an attribute of the

20   element.

44.   The method of claim 33, wherein said step of providing a standard interface to allow management of the element via the at least one user interface comprises the step of implementing a method to store a configuration of the element.

5   45.   The method of claim 33, wherein said step of providing a standard interface to allow management of the element via the at least one user interface comprises the step of implementing a method to restore a configuration of the element.

46.   A method of creating a managed element for an enterprise system

10   managed by a management framework, comprising the steps of:

selecting a particular element on a user interface that has a corresponding class associated therewith;

requesting a definition of the class from the management framework;

identifying an appropriate resource provider within the management framework;

15   returning the class definition to the user interface;

creating an instance of the element; and

persisting the instance of the element.

47.   In a computer system having a graphical user interface including a display and a user interface selection device, a method of providing and selecting management tasks and resources, comprising the steps of:

providing a display having multiple panes;

displaying a list of elements available for management in one of said panes; and

displaying data relating to AII in another of said panes upon selection of one said elements of said list.

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